

REMARKS

Claims 1-10 are pending in the application.

Claims 1-10 are rejected.

Claims 1-10 are rejected under 35 U.S.C. 112.

Claims 1-10 are rejected under 35 U.S.C. 103(a).

Claims 1 and 9 are amended.

New claim 11 is added.

No new matter is added.

Claims 1-11 remain in the case for consideration.

Applicant requests reconsideration and allowance of the claims in light of the above amendments and following remarks.

Claim Rejections – 35 USC § 112

Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The rejections are respectfully traversed.

Although the applicant does not necessarily acquiesce in the section 112 rejection, to facilitate the allowance of this case, claim 1 is amended to recite, “a dispenser configured to provide a filling material to fill said gaps between said semiconductor chips and said substrates.” Claim 9 is amended to recite similar limitations.

Also, claims 9-10 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps.

Although the applicant does not necessarily acquiesce in the section 112 rejection, to facilitate the allowance of this case, claim 9 is amended to recite, “mounting said semiconductor chips onto said substrates, placing one of said substrates in the suction of one of the sub-ducts; and filling said gaps ...wherein said inlet extends along substantially the entire length of the one side of the chip,” as suggested by the Examiner.

Thus, all of the rejections under 35 U.S.C. 112 are now overcome.

Claim Rejections – 35 USC § 103

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,048,656 to Akram et al (“Akram”) in view of US Patent No. 6,253,835 B1 to Sterner.

The rejections are respectfully traversed.

Claims 1 and 9 are amended to recite, for example, “said inlet extends along substantially the entire length of said one side of said semiconductor chip.”

None of the cited references, either alone or in combination, teach or suggest all of limitations of claim 1 including the above limitations. For instance, in Akram, a plurality of dams surround the semiconductor device and have openings between them, particularly at the corner of the chip. Because inlet 164 is placed adjacent this opening formed at corner of the chip, Akram does not teach or suggest, “said inlet extends along substantially the entire length of said one side of said semiconductor chip.”

Further, Sterner is directed to a system to cool components or draw air from outside the electronic device to cool the mixed air flow from the heat producing component and system component. If, in the system of Sterner, the components were surrounded by dams as in the Akram invention, the cooling of the system would be substantially disrupted because of the dams blocking the flow of air. See FIGS. 5-8 of Akram. See the abstract and col. 4, lines 45-50 of Sterner. On the other hand, if the Akram is modified as in the system of Sterner, the underfill material would not be filled in a uniform manner as intended by the Akram. If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)

For the reasons discussed above, the cited references, either alone or in combination, do not teach or suggest all of the limitations of claim 1 or claim 9. Accordingly, the rejection does not present a *prima facie* case of obviousness.

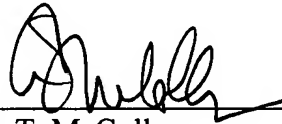
Therefore, claims 1 and 9 are allowable and claims 2-8 and 11, which depend therefrom and recite features that are neither taught nor disclosed in the cited references, are also allowable.

For the foregoing reasons, reconsideration and allowance of claims 1-11 of the application as amended is solicited. The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

Customer No. 20575

Respectfully submitted,

MARGER JOHNSON & McCOLLOM, P.C.



Alan T. McCollom
Reg. No. 28,881

MARGER JOHNSON & McCOLLOM, P.C.
1030 SW Morrison Street
Portland, OR 97205
503-222-3613

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Non Fee Amendment Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
Date: May 6, 2004


Adrienne Chocholak